REMARKS

Claims 1-33 are pending. Claims 27-33 have been added by way of the present amendment. Support for the claim amendments can be found throughout the specification, such as, e.g., in FIGS. 5A and 5B.

In the action mailed March 25, 2005, claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,849,376 to Barclay et al. (hereinafter "Barclay").

Claim 1 relates to a photoresist. The photoresist includes a lactone bonded to a polymer backbone. The lactone is reactable under semiconductor processing conditions and in the presence of an acid to undergo a ring-opening reaction and form an open ring structure.

Barclay neither describes nor suggests such a photoresist. Although Barclay's photoresists can include lactones as at least a portion of the polymer backbone, none of the lactones that Barclay describes will undergo a ring-opening reaction under semiconductor processing conditions in the presence of acid.

Accordingly, claim 1, and the claims dependent therefrom, are not anticipated by Barclay and the rejection should be withdrawn.

Claim 21 was rejected under 35 U.S.C. § 102(e) as anticipated by Barclay.

As amended, claim 21 relates to a method that includes forming a photoresist with a polymer backbone and a lactone. The lactone is bonded to the polymer backbone so as to undergo a ring opening reaction upon exposure to an acid catalyst. The lactone includes a tertiary carbon bonded to the lactone carbonyl oxygen.

Barclay neither describes nor suggests such a photoresist. Although Barclay's photoresists can include lactones as at least a portion of the polymer backbone, none of the lactones that Barclay describes include a tertiary carbon bonded to the lactone carbonyl oxygen.

Please note that the "tertiary alicyclic hydrocarbon ester moieties" described at col. 5, line 58-66 are esters used to attach photoacid-labile groups to the polymer backbone and hence not included in lactones in the polymer backbone.

Therefore, claim 21, and the claims dependent therefrom, are not anticipated by Barclay and the rejection should be withdrawn.

Claim 25 was rejected under 35 U.S.C. § 102(e) as anticipated by Barclay.

As amended, claim 25 relates to a method that includes radiating an area of a chemically amplified photoresist in a vacuum environment and generating an acid within the photoresist to catalyze a ring-opening reaction in the photoresist without molecules outgassing from the photoresist.

Barclay neither describes nor suggests such a method. To begin with, even if Barclay's photoresists could, in theory, undergo a ring-opening reaction under certain conditions, Barclay neither describes nor suggests such a ring-opening reaction.

Further, Barclay's resist generally includes photoacid-labile groups that undergo cleavage reactions upon exposure to acid. *See, e.g.*, col. 5, line 50-53, col. 5, line 58 - co. 6, line 13, and col. 6, line 35-70. To the extent that these groups detach from a polymer backbone upon exposure to a photo-generated acid, they will outgas in a vacuum environment. *See, e.g.*, para. [0019] of the present specification.

Therefore, claim 25, and the claims dependent therefrom, are not anticipated by Barclay and the rejection should be withdrawn.

Applicant asks that all claims be allowed. Please apply the excess claim fees to Deposit Account No. 06-1050. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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